

Response
Application No. 10/551,458
Attorney Docket No. 053160

REMARKS

Claims 1-6 are pending in the application. By this Amendment, claims 1 and 2 have been cancelled and claim 3 has been amended. It is submitted that this Amendment is fully responsive to the Office Action dated June 12, 2006.

Allowable claim

Applicants gratefully appreciate the indication that claim 4 would be allowable if rewritten in independent form. However, for at least the reasons set forth below, it is submitted that all of claims 3-6 are allowable.

Drawings

The formal drawings filed 11/15/05 are objected to in item 1 of the Action due to the Examiner's assertion that the function of each box in Figs. 1 and 2 must be labeled. This objection is traversed.

It is submitted that the Examiner's position is over-critical, since there is no need to label the function of the boxes in the drawings. If the Examiner is relying on any statute or case law, the Applicant respectfully requests the Examiner to indicate the grounds of this objection. Accordingly, withdrawal of this objection is respectfully requested.

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Specification

The specification is objected to as including some typographical errors regarding reference numerals. This objection is respectfully traversed. It is respectfully submitted that such errors have been corrected by the present Amendment.

Claim Rejections - 35 U.S.C. §102 and §103

Claims 1-3, 5 and 6 are rejected under 35 U.S.C. §102(b) or in the alternative under §103(a) as being unpatentable over Shimogama (USP 6,498,448). This rejection is traversed.

Claim 3 recites “selecting member for selecting any one of the release signal outputted from the control unit and the release signal outputted from the manual brake releasing input member so as to operate the first relay and the second relay”.

In the Office Action, the Examiner associates this part of the claim elements with an alternate switch 13 of Shimogama ‘448 (Page 4, the bottom line of the Office Action).

In Shimogama ‘448, the alternate switch 13 is disposed in machine 11 for switching the ac power supply 9 to the battery 20 or vice versa as a brake-releasing-power-supply (see col. 4, lines 57-59). That is, the alternate switch 13 shown in Figs. 7 and 8 of Shimogama (USP No. 6,498,448) selects the power supply from the rectifier or the power supply from the battery 20 by

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connecting the contact K13 of the relay K1 driven by the motor driving signal 3 and the contact K21 of the relay K2 driven by the brake releasing signal 7 in series and closing thereof.

In summary, Shimogama '448 discloses that the alternate switch serves as a selector for power supplies, but not a selector for release signals to operate the first relay and the second relay. Therefore, Shimogama '448 does not disclose or fairly suggest the claimed feature of "selecting member for selecting any one of the release signal outputted from the control unit and the release signal outputted from the manual brake releasing input member so as to operate the first relay and the second relay," as called for in claim 3.

In addition to the above discussion, in Shimogama '448, the battery 20 is used as another power supply for releasing the brake in addition to a dc power supply which is derived from the full-wave rectification of the ac power supply 9 (see col. 4, lines 52-55).

With this regard, as discussed in the original specification of the present Application, one of the problems to be solved by the present Application is that the brake releasing-purpose power supply must be provided inside the robot control apparatus in addition to main power supply (Page 3, lines 24-26).

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According to claim 3, since the first relay and the second relay are operated by either the release signal selected by the selecting member, another power supply for releasing the brake can be removed. This is described in the original specification of the present application:

since both the brake power supply apparatus which is normally used, and the brake power supply which is used in the manual operation are commonly used, an exclusively designed power supply and/or an exclusively designed battery are no longer employed within the robot control apparatus. As a result, there is another effect that the robot control apparatus can be made compact.” (Page 12, lines 1-8).

In summary, Shimogama ‘448 does not disclose or fairly suggest the claimed feature of “selecting member for selecting any one of the release signal outputted from the control unit and the release signal outputted from the manual brake releasing input member so as to operate the first relay and the second relay”. Shimogama ‘448, rather, teaches away from claim 3 by including an excess power supply for releasing the brake.

Furthermore, in Shimogama, Figs. 6, 7 and 8 show that the momentary switch 10b is connected to one of wires from the brake 2 in series, and it is disclosed that the brake 2 is released while an operator depresses the momentary switch 10a (column 4, lines 13 to 15). Further, in view of the sign of figures, the momentary switch 10b is known to be a normal open. However, since one of wires connecting to the brake always opens, it is impossible to supply a power, namely, it is impossible to release the brake.

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Thus, since the manual brake releasing according to Shimogama is a defective invention, Shimogama is an irrelevant reference.

Regarding the manual brake releasing of Shimogama, in Figs. 4 and 5, since the contact 10a of the switch for releasing the electromagnetic brake by an operator is merely connected in parallel to the open power supply circuit of the electromagnetic brake, there is still unnoticeable dangerousness that a final object of the motor shaft may drop due to its own weight by the false operation of the switch 10a, the fusion or adhesion of the contact. Further, in Figs. 6, 7 and 8, since the brake releasing is performed at only one contact 10b, there is still unnoticeable dangerousness wherein the final device one's own weight falls to erroneous operation of the switch 10a, fusion or adhesion of the contact.

On the contrary, in the manual brake releasing according to the present invention, since a plurality of contacts (normal open of the brake releasing relay 24 and normal open of the brake releasing master relay 26) are connected in series, even if the fusion or adhesion occurs in one contact, since the other contact opens so that it is possible to prevent the arm from falling. Thus the safety is improved.

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As such, the rejection under 35 U.S.C. §102(b) and §103(a) should be withdrawn.

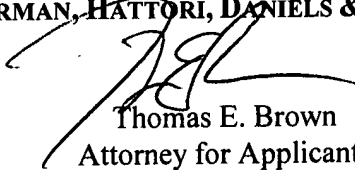
In view of the aforementioned amendments and accompanying remarks, Applicants submit that the claims, as herein amended, are in condition for allowance. Applicants request such action at an early date.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney to arrange for an interview to expedite the disposition of this case.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

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